In the Claims:

The following amendments to the claims replace all prior versions of the claims in the application:

1. (currently amended) An acetabular reamer for cutting a required ~~overall~~ cut shape, ~~defining a continuous macro geometric profile, the reamer~~ comprising a cutting shell having a series of cutting teeth thereon, wherein substantially all the teeth are doubly curved in that the cutting edges of the teeth are made up of at least two distinct curves, namely, a curve associated with ~~at least two of the teeth have~~ a matched arc cutting edge of substantial length and a curve associated with adjacent secondary cutting edges, the matched arc cutting edge *forming a cutting plateau and* having a cutting profile which substantially matches a profile of the overall shape to be cut, ~~connected to the shell by adjacent rise portions, the matched arc cutting edge following along a substantial portion of the macro geometric profile of the overall cut-shape, and, when combined with that of the other of the at least two such teeth on the reamer, the combination making up a further substantial portion of the macro geometric profile to be cut~~, thereby reducing a number of teeth required to cut the ~~macro geometric profile of the overall cut-~~shape, *wherein* said secondary cutting edges are supported by rise portions which curve back toward the cutting shell.

2. (original) The reamer of claim 1 wherein a generally circular hole precedes the cutting edges as the reamer is rotated for cutting.

3. (previously presented) The reamer of claim 1, wherein the reamer includes a series of cutting teeth arranged uniformly and spaced apart on the cutting shell.

4. (previously presented) The reamer of claim 3, wherein the series of cutting teeth are arranged in a spiral arrangement on the cutting shell.

5. (previously presented) The reamer of claim 1, wherein the cutting shell is a portion of a sphere in which the length of the cutting edges are selected so as to completely cut the shape, thereby enabling the use of fewer teeth than permissible with a cutting shell that has a more complete hemispherical shape.

6. (original) The reamer of claim 5, wherein the cutting shell is a hemisphere or portion thereof.

7. (currently amended) The reamer of claim 2, wherein the reamer includes a series of cutting teeth ~~are~~ arranged uniformly and spaced apart on the cutting shell.

8. (original) The reamer of claim 2, wherein the cutting teeth are arranged in a spiral arrangement on the cutting shell.

9. (original) The reamer of claim 3, wherein the cutting teeth are arranged in a spiral arrangement on the cutting shell.

10. (previously presented) The reamer of claim 2, wherein the cutting shell is a portion of a sphere in which the length of the cutting edges are selected so as to completely cut the shape, thereby enabling the use of fewer teeth than permissible with a cutting shell that has a more complete hemispherical shape.

11. (previously presented) The reamer of claim 3, wherein the cutting shell is a portion of a sphere in which the length of the cutting edges are selected so as to completely cut the shape, thereby enabling the use of fewer teeth than permissible with a cutting shell that has a more complete hemispherical shape.

12. (previously presented) The reamer of claim 4, wherein the cutting shell is a portion of a sphere in which the length of the cutting edges are selected so as to completely cut

the shape, thereby enabling the use of fewer teeth than permissible with a cutting shell that has a more complete hemispherical shape.

13. (previously presented) An acetabular reamer for cutting a shaped cavity into a bone, the cavity to be cut having a smooth contour cavity surface, the reamer comprising:

- a cutting shell having an outside cutting surface from which cutting surface project a plurality of cutting teeth;
- the cutting teeth being doubly curved cutting teeth and having a matched cutting edge ~~with a length~~ of substantial length and a curve associated with adjacent secondary cutting edges, the matched arc cutting edge *forming a cutting plateau and* having a cutting profile which substantially matches a profile of the overall shape to be cut;
- ~~the matched cutting edge having a cutting profile along~~ the ~~length which matches the contour of the cavity surface to be cut~~; and
- the matched cutting edges of the cutting teeth positioned on the reamer cutting surface in an overlapping arrangement, so that rotation of the cutting shell against the bone cuts the shaped cavity into the bone having the smooth contour cavity surface, the cut smooth contour having a cavity surface length greater than the length of a single matched cutting edge.

14. (previously presented) An acetabular reamer for cutting a shaped cavity into a bone, the cavity to be cut having a smooth contour cavity surface, the reamer comprising:

- a cutting shell having an outside cutting surface from which cutting surface project a plurality of cutting teeth;
- the cutting teeth being doubly curved cutting teeth and having a matched cutting edge ~~with a length~~ of substantial length and a curve associated with adjacent secondary cutting edges, the matched arc cutting edge *forming a cutting plateau and* having a cutting profile which substantially matches a profile of the overall shape to be cut;

~~the matched cutting edge having a cutting profile along the length which matches the contour of the cavity surface to be cut~~; and

- the matched cutting edges of the cutting teeth positioned on the reamer cutting surface in an overlapping arrangement, so that rotation of the cutting shell against the bone cuts the shaped cavity into the bone having the smooth contour cavity surface, the cut smooth contour having a cavity surface length greater than the length of a single matched cutting edge.